IEW&S
PROGRAM EXECUTIVE OFFICE

PM NV/RSTA

Office of the Project Manager -
Night Vision/Reconnaissance, Surveillance, and Target Acquisition

Armaments for the Army of the Future
Symposium and Exhibition

Presented by: COL Jeffrey A. Sorenson
Project Manager
23 June 1998

FY98 Organization

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PROGRAM EXECUTIVE OFFICE

PM NV/RSTA

PEO IEW&S

1 Program Office
3 Project Manager Offices
8 Product Manager Offices

MIL	CIV
37	119

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Program Executive Officer
(732)-427-2153

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Deputy PEO
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MIL	CIV
4	17

JPSD	Joint STARS	Signals Warfare	NV/RSTA	Combat ID	Sentinel	CISS

MIL 4	CIV 3	MIL 7	CIV 24	MIL 6	CIV 29	MIL 9	CIV 21	MIL 2 CIV 14	MIL 2 CIV 11	MIL 4

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To be determined

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Michael Bowman
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JTT/CIBS-M	ACS	GBCS	TESAR	SGF

Stephen Kostek
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Darrell Davis
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Product Manager
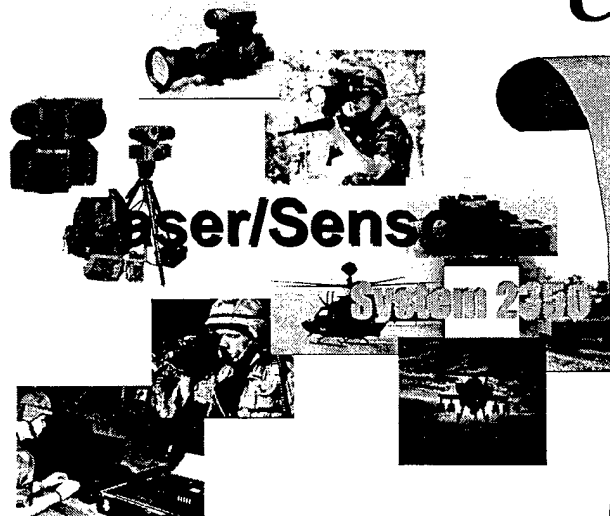(732)427-1479

Robert Golden
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Curtis McCoy
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Product Manager
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68pw.01

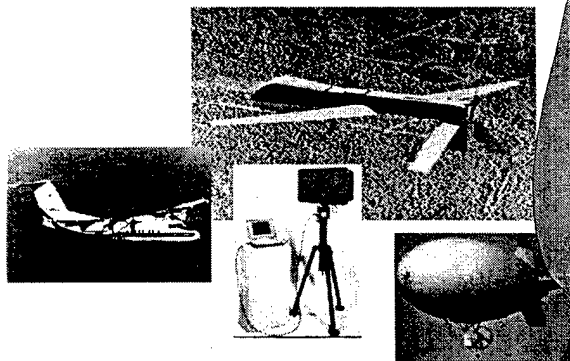288

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Project Manager - Night Vision/Reconnaissance, Surveillance, and Target Acquisition

PM NV/RSTA

Chartered Programs

Laser/Sensor

System 2350

Radar

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PROJECT MANAGER

Night Vision / Reconnaissance, Surveillance and Target Acquisition (PM NV/RSTA)

... You will, as the responsible management official, provide overall direction and guidance for the development, acquisition, testing, product improvements and fielding of assigned programs, to include Infrared Capabilities, Thermal Programs, Laser Programs, Electro-Optical Systems, Electro-Optical Countermeasure Systems, Hosted Moving Target Indicator/Synthetic Aperture Radar Payloads, Image Intensification Programs, associated unique test equipment, and the systems integration of relevant multi-sensor suites...

Responsible for... Horizontal Technology Integration opportunities ... and interoperability.

Program Executive Officer
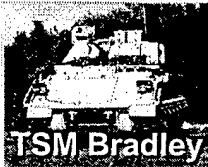Intelligence, Electronic Warfare, and Sensors

I2

Image Intensifiers

Thermal

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PM NV/RSTA Army Customers

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PM NV/RSTA

TSM Soldier

TSM Bradley

Fort Benning, GA

TSM-FSCS

TSM Abrams

Fort Knox, KY

PM NV/RSTA

Fort Rucker, AL

TSM-Apache

Fort Sill, OK

DCD USAFAS

Fort Huachuca, AZ

TSM UAV

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Technology & Systems Changing the Face of the Battlefield

PM NV/RSTA

See

Hear

OWN THE NIGHT

Know The Enemy

Disrupt

Deny

OWN THE SPECTRUM
(Offensive Control)

SGF

TWS

NVG

LVRS

Communicate

Out Think

Digitize the Battlefield Seamless Communications

LLDR

LRAS

OWN THE SPECTRUM
(Defensive Control)

Source: CECOM Vision 2010

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S&T Transition Plans

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PM NV/RSTA

6.2/Other	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006

Emissive Tech:
Uncooled DUAP
Autonomous Robotic
  Sensor Systems
Micro Sensor Technology
Ultra Lite IR Camera
Advanced FPAs
Adaptive Multi-Domain
  Sensing
Polarization Sensor
Third Generation FLIR
Mega Pixel Cooled FPA
Multi Color
3rd Gen Adaptive Sensor
APLA Sensor Network
Passive MMW Camera
See Thru/Sense Thru

Reflective Tech:
Low Cost Lite Wt. Optics
Solid State NIR
Head Tracked Vision Syst.

Processing:
Fused Image Sensor
Wavenet Technology
Aided Target Recog.

Displays:
Low Power Displays

Lasers:
Micro Eyesafe Solid State
Multi Function/Wave
Length

△ TWS Omni I

TWS Block I

△ TWS Omni II

△ TWS Omni III

Low Power Uncooled IR HTI Demo

TWS Block II / OICW / OCSW / LW

Integrated Sight

Improved DVE

Low Power E-O Sensors for Dismounted Warrior

6 cm

TWS Block III

Conventional I2CCD

Lens | I2 Tube | CCD | Display/Optics

Uncooled Micrcamera

Lens | NIR FPA | Display/Optics

Solid State Goggles

Aviation B-Kit FLIR

Aviator's Imaging Multispectral Modular Sensors

Air Warrior

Multimission UAV Sensors

TUAV Multispectral EO/IR

TUAV SAR

Target Acquisition

HTI Lasers

FSCS Sensor Suite

Multi-Function Staring Sensor Suite

Upgrades for FCS and FIV

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I2 Devices - Night Vision Goggles (NVG)

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PM NVRSTA

Extends the Battlespace for *FORCE PROTECTION*

Desert Storm

Current

Past

245m

Capabilities

NVG
PVS-5
PVS-7 A/B

Now

360m

NVG
PVS-7D

Future

> 2 km
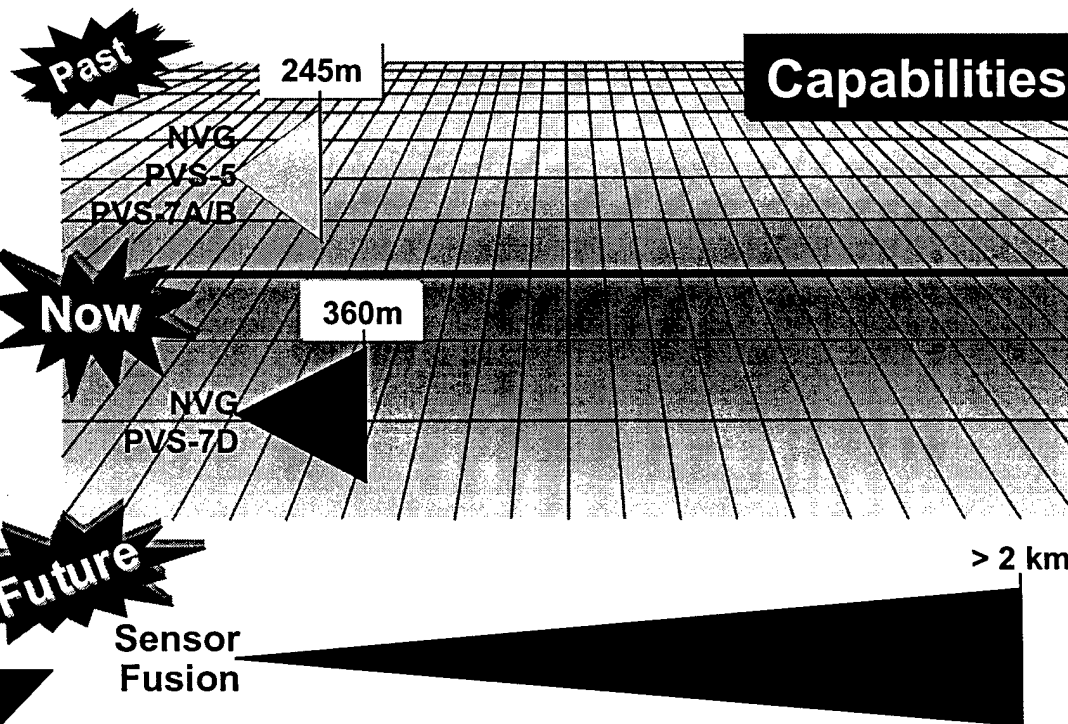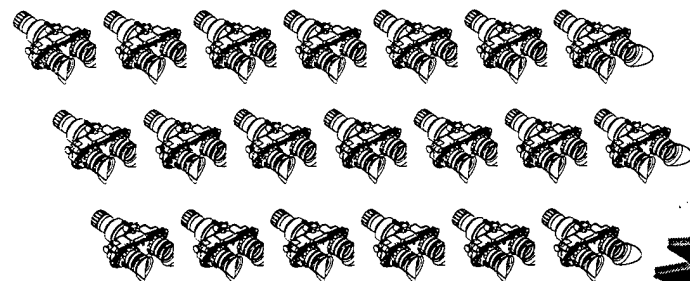
Sensor
Fusion

280% INCREASE

Sensor Fusion FUE: FY05

= 10000 systems

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Omni IV Gen III Gives
Increased Brightness & Image Clarity

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PM NV/RSTA

PERFORMANCE COMPARISONS

Clear Starlight Conditions
(~10⁻⁴fc)

Omnibus IV Gen III

Omnibus II Gen III

Gen II

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Thermal Weapon Sight
(TWS)

PM NV/RSTA

Brings the Darkness Into Focus - The Soldiers Night Eyes for PRECISION ENGAGEMENT
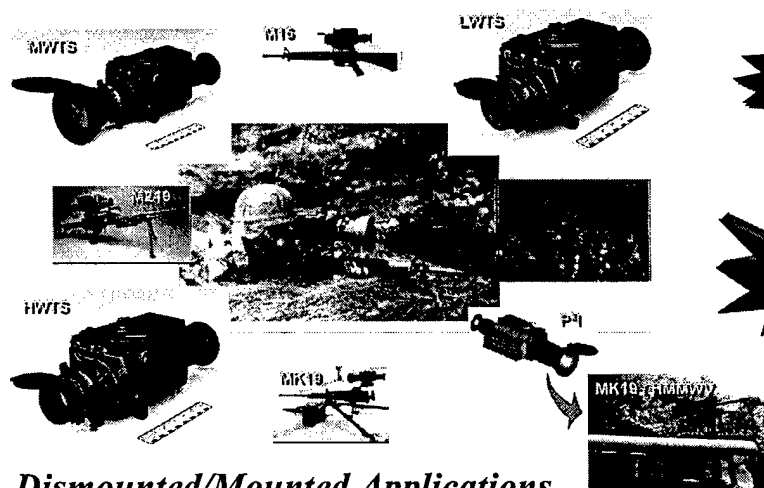
Dismounted/Mounted Applications

Capabilities

Past

360m

NVG

Now

LWTS 550m

MWTS 1,100m

HWTS 2,200m

TWS

	Range	Objective Weight	FOV
LWTS	550m	3.0 lbs	27°
MWTS	1100m	4.5 lbs	9°
HWTS	2200m	5.0 lbs	4°

FUE: FY98

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PROGRAM EXECUTIVE OFFICE
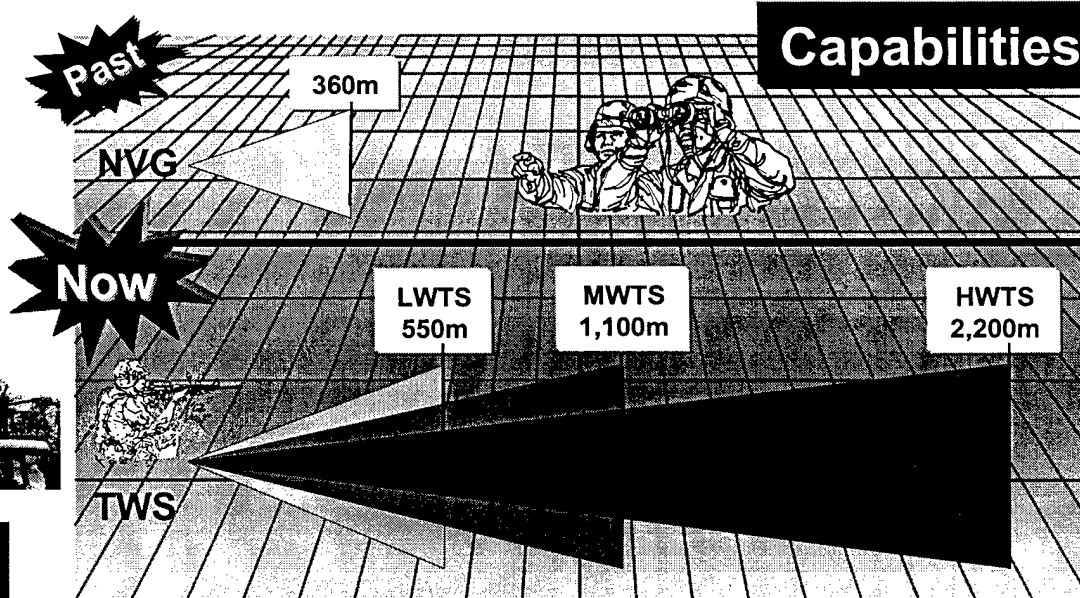
Long Range Scout Surveillance System (LRAS3)

PM NV/RSTA

HMMWV Mounted

Dismounted Tripod

➤ **6 Hours Operations (-20 to +55 C)**

➤ **Rechargeable Batteries**

➤ **Vehicle Battery Charger**

Key Performance Parameters

➤ Long Range Target Acquisition

➤ Far Target Location

➤ System Weight

➤ FBCB2 Interface

➤ Dismounted Operations
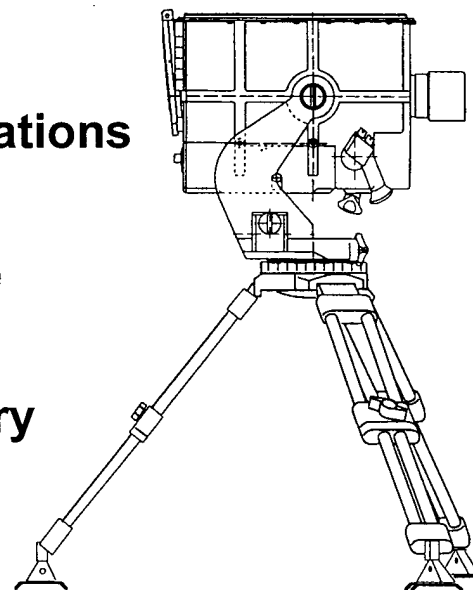
FUE: FY01

Picture through 2nd Gen FLIR
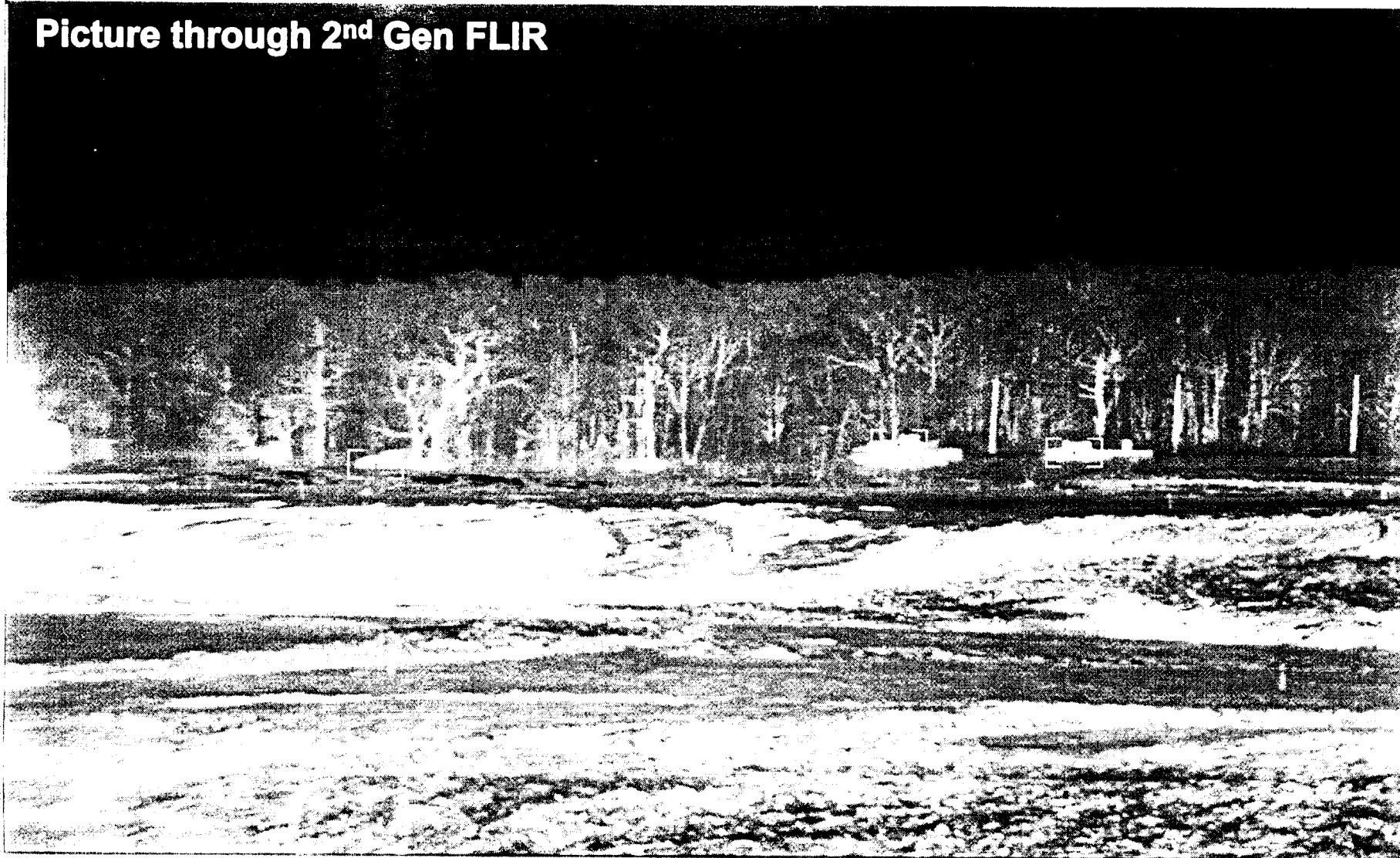
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Lightweight Laser Designator Rangefinder (LLDR)

PM NV/RSTA

Past

- G/VLLD and Night Sight
  Weight - 109 lbs

- No Digital Target
  Hand-off Capability

Now

System Description

- ➤ Joint Army/ USMC EMD Program
- ➤ Mission Configurable Modular Design
  (2-man portable)
- ➤ "See Spot" Boresight Capbilities
- ➤ Embedded GPS
- ➤ 640 x 480 FLIR
- ➤ Digital Target
  Hand-off Capability

Key Performance Parameters

- ➤ Total System Weight - <35 lbs
- ➤ Target Recognition - 6 km (day)
  2 km (night)
- ➤ Laser Designation - 5 km (stationary)
  3 km (moving)
- ➤ Target Location Accuracy - 80 m CEP
  @ 9,995 m
- ➤ Eyesafe Rangefinder - Up to 10 km

FUE: FY01

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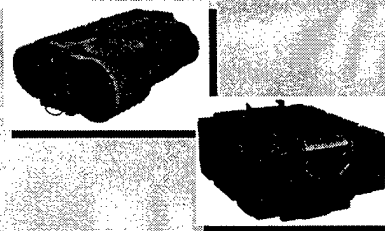
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Lightweight Video Reconnaissance System (LVRS)

PM NV/RSTA

Extends the Battlespace for FORCE PROTECTION - Widens the Safety Zone for Recon Soldiers

Past

SALUTE Report

Now
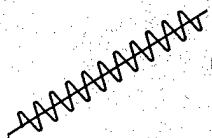
Base Station

➤ **Manportable**

➤ **Near *REAL TIME* Imagery**

➤ **Target Data Dissemination**

Out Station

• **Night - 500m**

• **Day - 1.5km**

FUE: FY98

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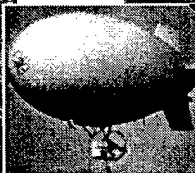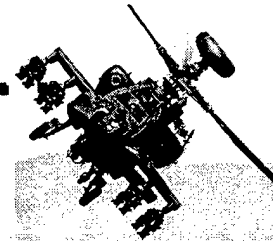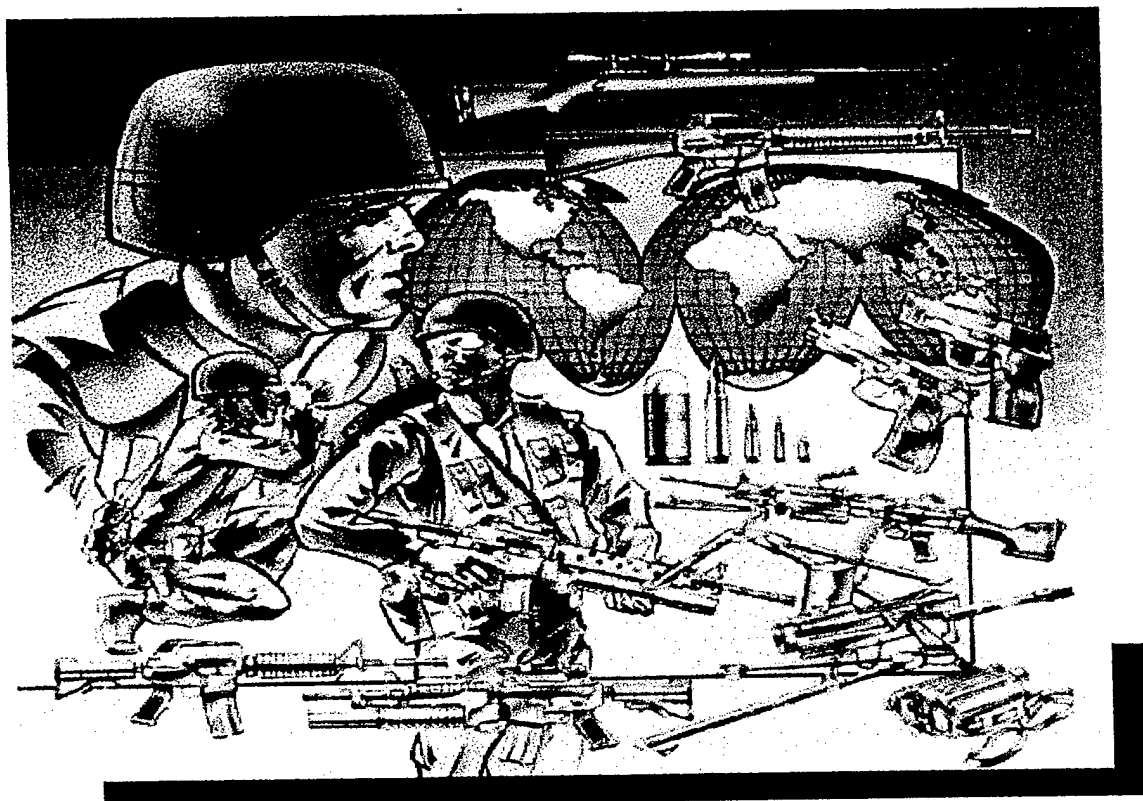
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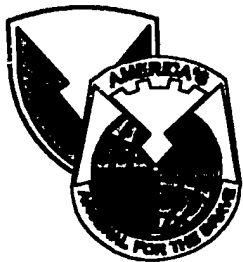
TACOM

**Mobility and Firepower
for America's Army**

NDIA
*Armaments for the Army
of the Future*

**An International Symposium
& Exhibition**

June 23 - 24, 1998

Parsippany, NJ

LTC W. Irish.

P.M. Small Arms

Tank-automotive & Armaments COMmand
Committed to Excellence

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